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Are black Hispanics black or Hispanic? Exploring disparities at the intersection of race and ethnicity

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Abstract

Background—Disparities in health among blacks and Hispanics compared to whites individuals exist for a number of health measures; however, the health profile of individuals who are both black and Hispanic is not well known. We sought to determine whether race and ethnicity have synchronous or independent effects on health-related outcomes.

Methods—We combined the National Health Interview Survey for 2000–2007 to identify 896 black Hispanics. We selected health-related outcomes where white Hispanics and non-Hispanic blacks significantly differed. We computed adjusted prevalence estimates for black Hispanics and compared them to determine whether their health-related outcomes more closely resemble white Hispanics or non-Hispanic blacks. All prevalence estimates were adjusted for age, sex, education, marital status, income and survey year.

Results—Black Hispanics' health behaviours resembled white Hispanics or were similar to both white Hispanics and non-Hispanic blacks. For health services outcomes, they resembled non-Hispanic blacks. However, their health status was influenced by both race and ethnicity, with black Hispanics resembling both white Hispanic and non-Hispanic black people.

Conclusion—We conclude that health behaviour interventions incorporating knowledge of Hispanic cultures may be sufficient to reach black Hispanics. However, health services or health status, interventions targeted broadly to Hispanic people may not be sufficient. In some respects black Hispanic people comprise a distinct subgroup that may require targeted attention in public health interventions.

INTRODUCTION

Race and ethnicity have been extensively documented as correlates of health-related outcomes. Black and Hispanic Americans generally have a poorer health profile compared to white and Asian Americans, and, in general, black people tend to have worse health status compared to Hispanics. However, at the intersection of race and ethnicity there is a subgroup whose health status has gone largely uncharacterised—black Hispanics. Black

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Hispanics are a subgroup of both the black and Hispanic populations. They may share similar cultural characteristics with non-black Hispanic people, which influence their health status. However, their visual similarity to non-Hispanic blacks may place them at increased risk for exposure to discrimination or other health risks faced by non-Hispanic blacks.

The few studies of black Hispanics have documented mixed results regarding differences in health outcomes compared to other groups.[1–3] For example, one study reported no significant differences in hypertension prevalence between black and white Hispanics[1]; however, another study found a higher prevalence of diabetes for black Hispanics compared to white Hispanics.[2] Costas and colleagues found that darker skinned Puerto Ricans were more likely to have high systolic blood pressure compared to lighter skinned Puerto Ricans.[3] Given the limited research literature, it is not yet known whether racial and ethnic status exerts synchronous or independent influences on health-related outcomes. Racial and ethnic status may exhibit different patterns of influence on different health domains, including health status, health behaviours and the use of health services. Depending on the relative importance of the social pressures of race or the cultural ties of ethnicity, the health of black Hispanics may more closely resemble the health of either non-black Hispanics or non-Hispanic blacks. By comparing health-related outcomes of black Hispanics to white Hispanics and non-Hispanic blacks, we can begin to disentangle race from ethnicity and determine the relative impact of each. By doing so, we can determine how best to target interventions to the black Hispanic subgroup.

METHODS

The National Health Interview Survey (NHIS) is a household interview conducted annually by the US Census Bureau for the National Center for Health Statistics, which surveys a nationally representative sample of the US population. A full description of the design and implementation of NHIS is published by the National Center for Health Statistics.[4, 5] Briefly, NHIS uses a multistage stratified cluster probability sampling design that is fielded throughout each year and includes questions on health status, health behaviour and healthcare utilisation, as well as sociodemographic status. Black and Hispanic populations are oversampled in the NHIS design to yield more accurate health estimates for these populations. Data for these analyses were derived from the Person Public Use and Sample Adult files, which includes records for individuals 18 years and older.

Because black Hispanics comprise only 2.0% of the Hispanic population,[6] we combined 8 years of cross-sectional data from the 2000–2007 NHIS to ensure a sufficient sample size to conduct our analyses. Respondents who reported their race to be either black only or white only and responded to the question on Hispanic ethnicity were included in our analyses. We excluded respondents who reported Hispanic ethnicity but reported ‘some other race’ as their racial status as they may comprise a heterogeneous group containing a spectrum of racial categories.[1] This strategy resulted in an analytic sample size of 68 416 adults: 896 black Hispanics adults, 34 605 white Hispanic adults and 32 915 non-Hispanic black adults.

Study variables

Outcome measures were classified into three health domains: health status, health services and health behaviours.

The health status domain consisted of the self-report of several health conditions. Participants reported whether a doctor or healthcare professional had told them they had a stroke, hypertension, asthma, diabetes or any heart condition. Each of these variables was specified as a binary variable. Female respondents were asked to exclude gestational diabetes when considering if they ever had diabetes. The NHIS does not distinguish between

type I and type II diabetes. The heart condition variable identified individuals who reported at least one heart condition, such as coronary heart disease, angina, myocardial infarction or any other heart condition.

The health services domain was comprised of health insurance coverage, having a usual source of care and having seen a doctor within the past year. Respondents with health insurance were those who had any of the following forms of coverage: private health insurance, Medicare, Medicaid, State Children's Health Insurance Program, a State-sponsored health plan, another government programme or a military health plan. Participants reported whether there was a place they usually go when sick or in need of advice about their health. The variable for doctor's visits was based on a question asking if in the past year had the participant seen or talked to a 'general doctor' regarding their own health. Each of these variables was specified as a binary variable.

The health behaviour domain included variables for obesity, overweight, current smoker, never smoker, current drinker, never drinker and physical activity. Participants with a body mass index (BMI) 30 or over were classified as obese. Participants whose BMI was between 25 and 30 were considered overweight. Smoking status was based on the questions: 'Have you smoked at least 100 cigarettes in your entire life' and 'Do you now smoke cigarettes every day, some days or not at all?' Persons who reported currently smoking cigarettes some days or every day were coded as 'current smokers.' 'Never smokers' were those who reported not currently smoking and not having smoked 100 cigarettes in their lifetime.

Drinking status was based on three questions: 'In any 1 year, have you had at least 12 drinks of any type of alcoholic beverage?', 'In your entire life, have you had at least 12 drinks of any type of alcoholic beverage?' and 'In the past year, how often did you drink any type of alcoholic beverage?' Current drinkers were identified as persons who had at least 12 drinks of an alcoholic beverage in 1 year and have drank an alcoholic beverage in the past year regardless of frequency of drinks per week. Never drinkers were identified as persons who have had less than 12 drinks in their lifetime.

Physical activity was derived from two questions: 'How often do you do vigorous activities for at least 10 min that cause heavy sweating or large increases in breathing or heart rate?' and ' About how long do you do these vigorous activities each time?' Persons identified as engaging in vigorous activity met the Healthy People 2010 objective, which entails engaging in vigorous activities at least 3 times per week for at least 20 min.[7]

Race and ethnicity was our main independent variable. Black Hispanics were persons who considered themselves to be Hispanic/Latino and reported only black/African-American as their race. White Hispanics were persons who considered themselves to be Hispanic/Latino and reported only white as their race. Non-Hispanic blacks were persons who did not consider themselves to be Hispanic/Latino and reported only black/African-American as their race.

Covariates used in the analysis included age, sex, marital status, income, education and survey year. Age was specified as a continuous variable. Male sex was specified as a binary variable. Marital status was categorised into four binary variables: never married, married/living as married, divorced/separated and widowed. Income was categorised into three groups: less than $35 000, $35 000–74 999 and $75 000 or more. Education level was categorised into five groups: less than 9th grade, 9th to 12th grade, high school graduate or general equivalency diploma (GED), some college or Associate's degree, and college graduate or more. Nativity was specified as a binary variable (US born vs foreign born). We used language in which the interview was conducted as a proxy for acculturation. Interviews were conducted in English only, English and Spanish or Spanish only. A variable that

indicates which year the respondent participated in the NHIS was included as a covariate to account for secular trends in health-related outcomes over the 8-year period.

Statistical analysis

We calculated descriptive statistics for the sample population and calculated the prevalence estimates for the various health outcomes by racial/ethnic group. To determine statistical significance, we used t tests and χ^2 tests for the descriptive statistics and the 95% CIs for the prevalence estimates.

The variables included in the analysis were determined by identifying health-related outcomes that had statistically significant differences between white Hispanics and non-Hispanic blacks using linear regression models (data not shown). We then specified linear regression models to estimate the prevalence of each health outcome for each racial/ethnic group and to compare the prevalence estimates between the groups. Models were adjusted for survey year, age, sex, marital status, income and education. The adjusted prevalence estimate and 95% CI for black Hispanics was compared to white Hispanics and non-Hispanic blacks. Black Hispanics were termed 'Hispanic' for outcomes where their CIs contained the white Hispanic prevalence but not the non-Hispanic black prevalence. They were termed 'black' for outcomes where their CIs contained the non-Hispanic black prevalence but not the white Hispanic prevalence. They were termed 'both Hispanic and black' for outcomes where their CIs contained both the white Hispanic prevalence and non-Hispanic black prevalence. And, black Hispanics were termed 'neither' for outcomes where their CIs contained neither the white Hispanic prevalence nor the non-Hispanic black prevalence (table 1).

All analyses have been adjusted by Taylor-linearisation procedures to account for the multistage sampling design of the NHIS data. A new weight variable was created to account for the aggregation of data by following the procedure recommended by the National Center for Health Statistics. We used SPSS version 16.0 to conduct data management procedures and used SAS version 9.2 to perform the statistical analysis.

RESULTS

Table 2 presents sample characteristics for black Hispanic, white Hispanic and non-Hispanic blacks. Black Hispanics were younger compared to the other groups and they had an income level that was less than white Hispanics but similar to non-Hispanic blacks. Black Hispanics were intermediate to white Hispanics and non-Hispanic blacks for education level, with non-Hispanic blacks more highly educated and white Hispanics less educated. Black Hispanics were also intermediate for marital status, with white Hispanics more likely to be married and non-Hispanic blacks less likely to be married. Black Hispanics were more likely to be US born and to have conducted the interview in English compared to white Hispanics.

In table 3 we compared the three groups across health domains. Black Hispanics were similar to both white Hispanic and non-Hispanic blacks for diabetes, heart condition and stroke prevalence estimates. For example, black Hispanics had a heart condition prevalence estimate of 9.1% (95% CI 7.1 to 11.1). The heart condition prevalence estimate for non-Hispanic blacks (9.1%) and white Hispanics (8.8%) were within the CI for black Hispanics. However, black Hispanics' hypertension prevalence estimate was similar to only white Hispanics, with both white Hispanics (22.3%) and black Hispanics (23.9%) less likely to have hypertension than non-Hispanic blacks (30.8%). Also worth noting was the prevalence estimate of asthma. The black Hispanics' asthma prevalence estimates (18.5%) was different from both white Hispanic (10.2%) and non-Hispanic black people (9.5%), with black Hispanics more likely to have asthma than both racial/ethnic groups.

Black Hispanics resembled non-Hispanic blacks for insurance coverage and the likelihood of having seen a doctor within a year. However, they were different from both white Hispanics and non-Hispanic blacks for the likelihood of having a usual source of care (76.8%) least likely to have a usual source of care, non-Hispanic blacks (81.4%) most likely to have a usual source of care and black Hispanic people (81.0%) intermediate to the two racial/ethnic groups.

Black Hispanics resembled white Hispanics for obesity and overweight. Both black and white Hispanics were less likely to be obese and more likely to be overweight than non-Hispanic blacks. Black Hispanic people also resembled white Hispanics for current drinking status, with both black and white Hispanics more likely to be current drinkers relative to non-Hispanic blacks. For physical activity, black Hispanics were similar to both racial/ethnic groups. Black Hispanics were also similar to both racial/ethnic groups for smoking status.

Table 4 is a summary of the comparisons. The table shows that black Hispanics were more likely to resemble both white Hispanics and non-Hispanic blacks for outcomes under the health status domain. On the other hand, black Hispanics were more likely to resemble only non-Hispanic blacks for outcomes under the health services domain. For outcomes in the health behaviours domain, black Hispanics were more likely to either resemble only white Hispanics or resemble both groups.

DISCUSSION

We combined 8 years of data from the NHIS to conduct analyses that compared health-related outcomes of black Hispanics to white Hispanic and non-Hispanic blacks. We sought to disentangle race from ethnicity and determine the relative impact of each. Our analysis provides evidence that both race and ethnicity influence the health of black Hispanics.

Ethnicity (Hispanic status) seems to play the dominant role in health behaviours, while race is most prominent with regard to health services. Race and ethnicity combine to influence the health status of black Hispanics. That black Hispanics were more like white Hispanics with regard to health behaviour may reflect that behaviour is more closely associated with culture. The common cultures among black and white Hispanic people may motivate similar values, beliefs, attitudes and behaviours. On the other hand, that race exerts greater influence on health status and health services of black Hispanics may reflect the impact of societal forces. Black Hispanic's visual similarity with non-Hispanic blacks may lead to similar social status and subject them to similar levels of discrimination.

Hispanic people do not constitute a unitary culture. Hispanics represent an amalgam of cultures from various countries of Latin America. While there are similarities among the cultures, there is variation as well. The variation may, at times, be overlooked by combining them into one group within US data systems. The distribution of nationality among Hispanic subgroups differed somewhat between the white Hispanic and black Hispanic samples. The majority of black Hispanics were of Puerto Rican descent (32.3%), followed by Central or South American (19.9%), Mexican/Mexican-American (19.3%) and the Dominican Republic (15.0%). For white Hispanics, the majority were of Mexican/Mexican-American descent (64.2%) followed by Central or South American descent (14.4%). Compared with Hispanics from other countries, Puerto Ricans come to the US mainland with citizenship and a greater ability to access employment opportunities and publicly financed health services. The relatively larger proportion of black Hispanics emanating from Puerto Rico likely accounts in part for their similarity with non-Hispanic blacks with regard to health services.

The high prevalence of asthma in Puerto Ricans has been noted in previous research.[8] This might suggest that the high asthma prevalence revealed in our analysis is being driven by the relatively large proportion of Puerto Ricans in our black Hispanic sample. To test this proposition, we computed asthma prevalence estimates among black Hispanics excluding Puerto Ricans. This analysis found that non-Puerto Rican black Hispanics still had a higher asthma estimated prevalence rate (15.7%). While this asthma prevalence is lower than the prevalence estimate for black Puerto Ricans (22.4%), it is still significantly higher than the prevalence estimate for non-Hispanic blacks (11.0%) and white Hispanics (9.0%).

One limitation of our analysis is the self-report of health conditions and behaviours. However, the self-report of health-related factors has been documented to have high reliability.[9, 10] In addition, due to the cross-sectional nature of the study, no causal inferences can be made. However, we believe, that the limitations of our study are outweighed by the strengths. Aggregation of 8 years of NHIS data generated a large sample of black Hispanics, which allowed adjustment for multiple potential confounders. And, unlike previous studies, we were able to examine multiple health-related outcomes. This increases confidence that the patterns observed are not idiosyncratic.

The results of this analysis indicate that the health-related outcomes of black Hispanics are influenced by elements of both race and ethnicity. This suggests that black Hispanics may be responsive to public health interventions that are tailored to either non-Hispanic blacks or white Hispanics. As the black Hispanic population continues to grow in the USA, public health interventions should consider these findings. The heterogeneity of Hispanic people should also be considered when developing interventions for both white and black Hispanics. As noted,[8] health behaviours and outcomes can vary by Hispanic subgroup based on country of origin and, thus, public health interventions should not only account for race in targeting Hispanics but culture as well. It is also instructive to point out that this problem is not unique to Hispanics. Most studies of black non-Hispanics and white non-Hispanics do not account for variation in national origin. Most data systems in the USA combine US-born blacks with Caribbean and African-born blacks. Future research should seek to determine the role of culture or country of origin in health behaviours and outcomes among both white and black Hispanics.

When addressing health behaviour, interventions that are tailored to the various Hispanic cultures may effectively reach black Hispanic people. However, for interventions addressing health services or health status, interventions targeted broadly to Hispanics may not be sufficient. For the purposes of public health practice or interventions, black Hispanics appear to comprise a distinct subgroup not simply classifiable as Hispanic or black non-Hispanic. Black Hispanics display similarities and differences from both groups. Because of this complexity, the Black Hispanic subgroup may require tailored attention in public health interventions.

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What is already known on this subject

Race and ethnicity have been documented as correlates of health-related outcomes, with Black and Hispanic people generally having a poorer health profile compared to white and Asian American people, and blacks tending to have worse health status compared to Hispanics.

What this study adds

We disentangle race and ethnicity to determine that black Hispanics comprise a distinct subgroup not simply classifiable as Hispanic or black non-Hispanic. Black Hispanics display similarities and differences from both groups. Because of this complexity, the Black Hispanic subgroup may require tailored attention in public health interventions.

Table 1

Possible results when comparing black Hispanics to white Hispanics

Non-Hispanic black	White Hispanic	Assignment
Different	Same	Hispanic
Same	Different	Black
Same	Same	Both
Different	Different	Neither

Relationship with black Hispanic people was determined by whether prevalence estimates were within the black Hispanics' 95% CI.

Table 2

Select demographics by race/ethnicity among adults ≥18 years of age: National Health Interview Survey, 2000–2007

	Black Hispanic n = 896	White Hispanic n = 34605	Non-Hispanic black n = 32915
Age (mean ± SE)	37.7 ± 15.1	41.0 ± 16.0 *	45.1 ± 17.0 †
Gender, %			
Men	37.6	44.8 *	37.9
Women	62.4	55.2 *	62.1
Education, %			
Less than 9th grade	13.8	25.8 *	6.4 †
9th to 12th grade	20.8	20.0	16.9 †
High school	23.2	24.4	30.7 †
Graduate/GED			
Some college	29.5	20.2 *	30.5
College graduate	12.7	9.6 *	15.4 †
Income, %			
$0–34999	65.9	61.7 *	62.6
$35000–74999	24.9	28.3 *	27.3
$75000+	9.3	10.0	10.1
Marital status, %			
Never married	37.3	22.2 *	34.4
Married/living as married	40.2	57.2 *	33.0 †
Divorced/separated	19.3	15.1 *	22.3 †
Widowed	3.2	5.6 *	10.3 †
Nativity, %			
US born	46.4	38.9 *	91.2 †
Foreign born	53.6	61.1 *	8.8 †
Language of interview, %			
English	76.2	58.3 *	99.9 †
English and Spanish	8.6	14.9 *	0.0 †
Spanish	15.2	26.8 *	0.1 †

p Values are by the χ^2 statistic for gender, education, income, marital status, nativity and language of interview and by the t statistic for age.

* p Values (>0.05) for comparisons of black Hispanics with white Hispanics.

† p Values (>0.05) for comparisons of black Hispanics with non-Hispanic blacks.

GED; general equivalency diploma.

Table 3

Adjusted prevalence estimates and 95% CIs for various health domains by race/ethnicity among adults ≥18 years of age: National Health Interview Survey, 2000–2007

	Prevalence		
	Black Hispanic n = 896	**White Hispanic n = 34605**	**Non-Hispanic black n = 32915**
Health status			
Hypertension	23.9 (20.9 to 26.9)	22.3 (21.7 to 23.0)	30.8 (30.1 to 31.4)
Diabetes	10.6 (8.4 to 12.8)	8.8 (8.4 to 9.3)	9.3 (8.9 to 9.7)
Any heart condition	9.1 (7.1 to 11.1)	8.8 (8.4 to 9.2)	8.7 (8.2 to 9.1)
Stroke	2.6 (−3.7 to 9.0)	2.3 (−4.1 to 8.6)	2.7 (−3.7 to 9.0)
Asthma	18.5 (15.3 to 21.6)	10.2 (9.7 to 10.8)	9.5 (9.0 to 10.0)
Health services			
Insurance coverage	76.3 (72.9 to 79.8)	70.6 (69.9 to 71.2)	72.3 (71.7 to 72.9)
Usual source of care	81.0 (77.5 to 84.4)	76.8 (76.1 to 77.5)	81.4 (80.8 to 82.0)
Seen doctor in past year	65.7 (61.5 to 69.9)	58.8 (57.9 to 59.6)	63.8 (63.0 to 64.7)
Health behaviours			
Obese	32.3 (28.4 to 36.1)	30.0 (29.3 to 30.7)	34.0 (33.2 to 34.8)
Overweight	39.2 (35.1 to 43.2)	36.2 (35.5 to 37.0)	35.2 (34.4 to 35.9)
Current smoker	21.9 (18.7 to 25.1)	19.1 (18.4 to 19.8)	20.2 (19.6 to 20.9)
Never smoker	62.2 (58.0 to 66.4)	64.8 (63.9 to 65.7)	67.3 (66.5 to 68.0)
Current drinker	59.0 (54.5 to 63.4)	57.2 (56.5 to 58.0)	46.1 (45.2 to 47.1)
Never drinker	25.8 (21.8 to 29.9)	29.5 (28.7 to 30.2)	38.1 (37.2 to 39.1)
Vigorous activity	20.6 (17.1 to 24.1)	19.3 (18.5 to 20.0)	16.1 (15.4 to 16.9)

Models were adjusted for age, sex, marital status, income, education, nativity, language of interview and survey year.

Table 4

Black Hispanics resemblance based on a count of health outcome indicators within each health domain

Outcome	Hispanic	Black	Neither	Both
Health status				
Hypertension	X			
Diabetes				X
Any heart condition				X
Stroke				X
Asthma			X	
Total	1	0	1	3
Health services				
Insurance coverage			X	
Usual source of care		X		
Seen doctor in past year		X		
Total	0	2	1	0
Health behaviours				
Obese				X
Overweight				X
Current smoker				X
Never smoker				X
Current drinker	X			
Never drinker	X			
Vigorous activity	X			
Total	3	0	0	4
Net total across domains	4	2	2	7